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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,945	07/30/2003	Todd E. Richardson	05102.0487US01	8882
23552 7590 05/07/2008 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER LANEAU, RONALD	
			ART UNIT 3714	PAPER NUMBER
			MAIL DATE 05/07/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,945	<b>Applicant(s)</b> RICHARDSON, TODD E.	
	<b>Examiner</b> RONALD LANEAU	<b>Art Unit</b> 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03262008;01122004</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/26/08 has been entered.

***Claim Status***

2. Claim 2 is canceled and claims 1 and 3-39 are now pending.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Bair et al (US 5,846,139).

As per claims 1 and 22, Bair discloses a sports simulation system comprising: a projectile tracking apparatus (see fig. 1, detectors 50, 51, 52) including a display surface (see fig. 13, 26) on which a visually apparent three-dimensional sports scene is presented (see fig. 1), said projectile tracking apparatus (see fig. 1, detectors 50, 51, 52) capturing images of a projectile tracking region disposed in front of said display surface to detect a launched projectile traveling

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through said projectile tracking region towards said display surface (see fig. 1); and at least one processing stage receiving the image data and determining the three-dimensional positions, velocity and deceleration/acceleration of a detected projectile traveling through said projectile tracking region (page 3, lines 39-64), the three-dimensional positions, velocity and deceleration/acceleration being used by said at least one processing stage to calculate a trajectory of said launched projectile into said visually apparent three-dimensional sports scene (page 34, [0647]).

As per claim 3, Pryor discloses a sports simulation system, further comprising a display device coupled to said at least one processing stage, said display device receiving image data from said at least one processing stage and presenting said visually apparent three-dimensional sports scene including said simulation on said display surface (see fig. 1, 74).

As per claims 4-21 and 23-35, Bair discloses a system with a structure that meets all the limitations of the dependent claims such as updating the image data, having overlapping fields from the different cameras used to capture the projection in a generally perpendicular manner, a first processor generating two-dimensional projectile position data as said projectile travels through said projectile tracking region, said two-dimensional projectile position data being conveyed to a host processor constituting a second processing stage, said host processor using the two-dimensional projectile position data received from each first processor to generate three-dimensional projectile position data and to calculate the velocity and deceleration/acceleration of said projectile (col. 3, lines 39-64).

As per claim 36, Bair discloses a sports simulation system comprising: a projectile tracking apparatus (fig. 1, 50, 51, 52) including a display surface (see fig. 1) on which a visually

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apparent three-dimensional sports scene is presented (see fig. 1), said projectile tracking apparatus (see fig. 1, 50, 51, 52) capturing images of a projectile tracking region disposed in front of said display surface to detect a launched projectile traveling through said projectile tracking region towards said display surface (see fig. 1); and at least one processing stage receiving the image data and determining the three-dimensional positions, velocity and deceleration/acceleration of a detected projectile traveling through said projectile tracking region, the three-dimensional positions, velocity and deceleration/acceleration being used by said at least one processing stage to calculate a trajectory of said launched projectile into said visually apparent three-dimensional sports scene (col. 3, lines 39-64); inherently discloses an audio system to broadcast audio accompanying said video sequence (from playing the video on the screen, one would be able to listen to comments made before and after the shot).

As per claims 37-39, Bair discloses a system with a structure that meets all the limitations of the dependent claims such as updating the image data, having overlapping fields from the different cameras used to capture the projection in a generally perpendicular manner; a tracking apparatus wherein each said processor stores a projectile characteristic signature that is compared with captured images to detect the presence of a projectile therein; wherein said frame encompasses a rectangular region and wherein said projectile tracking apparatus includes four imaging devices, each having a field of view looking across and in front of said display surface from a different corner of said rectangular region, said fields of view overlapping in a generally perpendicular manner; further comprises a mirror associated with each digital camera to direct the field of view thereof across and in front of said display surface (col. 3, lines 39-64; see fig. 1).

***Response to Arguments***

5. Applicant's arguments with respect to claims 1 and 3-39 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lee (US 7,038,764 B2) discloses an apparatus and method for determining the velocity of a projectile.
- Nakayama et al (US 5,111,410) disclose a motion diagnosis system which picks up motion of a subject and analyzes them.
- Santavaci (US 4,858,922) discloses a method and apparatus for determining the velocity and path of travel of a ball.
- Wilson (US 4,150,825) discloses a golf game simulating apparatus including a tee area from which a player may drive a golf ball toward a curved target screen in front of the tee area.
- Petrov (US 7,335,116 B2) discloses a method and apparatus for locating the trajectory of an object in motion.
- Cooper et al (US 5,938,545) disclose a video system for determining a location of a body in flight.

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Any inquiry concerning this communication should be directed to RONALD LANEAU  
at telephone number (571)272-6784.

Ronald Laneau  
SPE  
Art Unit 3714

/Ronald Laneau/

Supervisory Patent Examiner, Art Unit 3714

05/05/08